RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/080,9~~~~ A_

Source: _IFW16_

Date Processed by STIC: _3-8-05_

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     RAW SEQUENCE LISTING                        DATE: 03/08/2005
     PATENT APPLICATION:  US/10/080,943A         TIME: 11:08:52

     Input Set : A:\iu-99.ST25.txt
     Output Set: N:\CRF4\03082005\J080943A.raw

 3 <110> APPLICANT: Indiana University Research and Technology Center
 4        Field, Loren J.
 5        Tsai, Shih-Chong
 7 <120> TITLE OF INVENTION: P193 PROTEINS AND NUCLEIC ACIDS, AND USES THEREOF
 9 <130> FILE REFERENCE: IU-99-PCT-US
11 <140> CURRENT APPLICATION NUMBER: 10/080,943A
12 <141> CURRENT FILING DATE: 2002-02-22
14 <150> PRIOR APPLICATION NUMBER: PCT/US00/23161
15 <151> PRIOR FILING DATE: 2000-08-23
17 <150> PRIOR APPLICATION NUMBER: US 60/150.266
18 <151> PRIOR FILING DATE: 1999-08-23
20 <160> NUMBER OF SEQ ID NOS: 13
22 <170> SOFTWARE: PatentIn version 3.3
24 <210> SEQ ID NO: 1
25 <211> LENGTH: 5217
26 <212> TYPE: DNA
27 <213> ORGANISM: mus musculus
30 <220> FEATURE:
31 <221> NAME/KEY: CDS
32 <222> LOCATION: (62)..(5131)
34 <400> SEQUENCE: 1
35 ttcctagctc tgcaaaggac aggcctcgcg caggatcccg gcggacttct gaggtgccac      60
37 g atg gta ggg gag cta cga tac agg gaa ttc agg gtg ccc ctg ggg cct    109
38   Met Val Gly Glu Leu Arg Tyr Arg Glu Phe Arg Val Pro Leu Gly Pro
39   1               5                   10                  15
41 ggc ttg cac gcg tat ccg gat gaa ttg atc cgc caa cgg gtt ggc cat    157
42 Gly Leu His Ala Tyr Pro Asp Glu Leu Ile Arg Gln Arg Val Gly His
43             20                  25                  30
45 aat ggg cac ccc gag tat cag atc cgc tgg ctc atc ctc agg cgc ggg    205
46 Asn Gly His Pro Glu Tyr Gln Ile Arg Trp Leu Ile Leu Arg Arg Gly
47         35                  40                  45
49 gat gat ggg gac cgg gac tct aca gtg gac tgc aag gct gag cat atc    253
50 Asp Asp Gly Asp Arg Asp Ser Thr Val Asp Cys Lys Ala Glu His Ile
51     50                  55                  60
53 ctg tta tgg atg tct gac gat gag atc tat gcc aac tgc cac aag atg    301
54 Leu Leu Trp Met Ser Asp Asp Glu Ile Tyr Ala Asn Cys His Lys Met
55 65                  70                  75                  80
57 ctg ggc gag aat ggc caa gtc atc gca cct tcc cgg gag tcc act gag    349
58 Leu Gly Glu Asn Gly Gln Val Ile Ala Pro Ser Arg Glu Ser Thr Glu
59                 85                  90                  95
61 gca ggg gcc ctc gac aag tct gtg ctg ggg gag atg gaa aca gat gtg    397
62 Ala Gly Ala Leu Asp Lys Ser Val Leu Gly Glu Met Glu Thr Asp Val
63             100                 105                 110
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65 aag tcc ttg att cag agg gcc ctt cgg cag ctg gag gag tgc gtg ggc      445
66 Lys Ser Leu Ile Gln Arg Ala Leu Arg Gln Leu Glu Glu Cys Val Gly
67         115                 120                 125
69 acc gtg cct cct gcc cct ctc ctt cac acg gtc cat gta ctc agt gcc      493
70 Thr Val Pro Pro Ala Pro Leu Leu His Thr Val His Val Leu Ser Ala
71         130                 135                 140
73 tat gcc agc atc gag ccc ctc act ggc atc ttc aaa gac cgc agg gtt      541
74 Tyr Ala Ser Ile Glu Pro Leu Thr Gly Ile Phe Lys Asp Arg Arg Val
75 145                 150                 155                 160
77 gtg aac ttg ctc atg cac atg ttg agc agt cct gat tat cag atc cgc      589
78 Val Asn Leu Leu Met His Met Leu Ser Ser Pro Asp Tyr Gln Ile Arg
79                 165                 170                 175
81 tgg agc gca ggc cgg atg atc caa gct ctg tcc tcc cac gat gct ggg      637
82 Trp Ser Ala Gly Arg Met Ile Gln Ala Leu Ser Ser His Asp Ala Gly
83                 180                 185                 190
85 acc cgg acc cag atc ctt ctg tca ttg agc caa caa gag gcc att gaa      685
86 Thr Arg Thr Gln Ile Leu Leu Ser Leu Ser Gln Gln Glu Ala Ile Glu
87                 195                 200                 205
89 aag cac ctg gat ttt gat agc cgc tgc gct ctg ctt gca ctg ttc gcc      733
90 Lys His Leu Asp Phe Asp Ser Arg Cys Ala Leu Leu Ala Leu Phe Ala
91         210                 215                 220
93 cag gct act ctc acg gaa cac ccg atg tct ttc gag ggc gtt cag ctg      781
94 Gln Ala Thr Leu Thr Glu His Pro Met Ser Phe Glu Gly Val Gln Leu
95 225                 230                 235                 240
97 cca cag gtc cca gga cgg ctg ctc ttc tcc ctg gta aaa cgc tac ctg      829
98 Pro Gln Val Pro Gly Arg Leu Leu Phe Ser Leu Val Lys Arg Tyr Leu
99                 245                 250                 255
101 cac gtc acc ttc ctc ctg gat cgg ctg aac ggc gat gca ggg gat caa     877
102 His Val Thr Phe Leu Leu Asp Arg Leu Asn Gly Asp Ala Gly Asp Gln
103                 260                 265                 270
105 gga gcc cag aac aac ttt agt cct gag gag ttg aat gta ggg agg ggc     925
106 Gly Ala Gln Asn Asn Phe Ser Pro Glu Glu Leu Asn Val Gly Arg Gly
107         275                 280                 285
109 cgg ctg gaa ctg gaa ttc agt atg gcc atg ggc act ctg atc tct gag     973
110 Arg Leu Glu Leu Glu Phe Ser Met Ala Met Gly Thr Leu Ile Ser Glu
111         290                 295                 300
113 ctg gtg cag gcc atg cgc tgg gac ggg gcc tca agc aga cca gag agt     1021
114 Leu Val Gln Ala Met Arg Trp Asp Gly Ala Ser Ser Arg Pro Glu Ser
115 305                 310                 315                 320
117 tct tcc tcc tcc acc ttc cag cct cgg cca gca cag ttc cgc ccc tac     1069
118 Ser Ser Ser Ser Thr Phe Gln Pro Arg Pro Ala Gln Phe Arg Pro Tyr
119                 325                 330                 335
121 acc cag cgt ttc agg agg tcg agg cgg ttt cgc ccc cgt gcc tcg ttt     1117
122 Thr Gln Arg Phe Arg Arg Ser Arg Arg Phe Arg Pro Arg Ala Ser Phe
123                 340                 345                 350
125 gcc agt ttt aat acc tat gcc ttg tat gtg cgg gac acg ctg cgg ccc     1165
126 Ala Ser Phe Asn Thr Tyr Ala Leu Tyr Val Arg Asp Thr Leu Arg Pro
127         355                 360                 365
129 ggg atg cgg gta cgg atg ctg gag aat tac gag gag atc gct gct ggg     1213
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130 Gly Met Arg Val Arg Met Leu Glu Asn Tyr Glu Glu Ile Ala Ala Gly
131     370                 375                 380
133 gat gag ggc cag ttc cga cag agc aat gat ggc gtt ccc cca gcg cag        1261
134 Asp Glu Gly Gln Phe Arg Gln Ser Asn Asp Gly Val Pro Pro Ala Gln
135 385                 390                 395                 400
137 gtg ttg tgg gat tca aca ggc cat acc tac tgg gtg cac tgg cac atg        1309
138 Val Leu Trp Asp Ser Thr Gly His Thr Tyr Trp Val His Trp His Met
139             405                 410                 415
141 ctg gag atc ttg ggc ttt gag gaa gac atc gag gat gtg att gat att        1357
142 Leu Glu Ile Leu Gly Phe Glu Glu Asp Ile Glu Asp Val Ile Asp Ile
143             420                 425                 430
145 gaa gag tta cag gag cta ggg gcc aat gga gca ctg agc atc gtc ccg        1405
146 Glu Glu Leu Gln Glu Leu Gly Ala Asn Gly Ala Leu Ser Ile Val Pro
147         435                 440                 445
149 ccg tcc cag cgc tgg aag ccc ata act cag ctc ttt gcc gag cct tac       1453
150 Pro Ser Gln Arg Trp Lys Pro Ile Thr Gln Leu Phe Ala Glu Pro Tyr
151     450                 455                 460
153 gtg gta ccc gag gag gaa gac agg gaa gag agc gag aac ttg acc cag       1501
154 Val Val Pro Glu Glu Glu Asp Arg Glu Glu Ser Glu Asn Leu Thr Gln
155 465                 470                 475                 480
157 gct gag tgg tgg gag ctc ctc ttc ttc atc cgg cag ttg agt gag gca       1549
158 Ala Glu Trp Trp Glu Leu Leu Phe Phe Ile Arg Gln Leu Ser Glu Ala
159             485                 490                 495
161 gag cgc ctt cac atc gtg gat ctc ctg caa gac cac ctg gaa gag gag       1597
162 Glu Arg Leu His Ile Val Asp Leu Leu Gln Asp His Leu Glu Glu Glu
163         500                 505                 510
165 cgc gtt ctg gac tac gat atg ctg cct gag ctg acc gtg ccc gtt gac       1645
166 Arg Val Leu Asp Tyr Asp Met Leu Pro Glu Leu Thr Val Pro Val Asp
167         515                 520                 525
169 ttg gcc cag gat ctg ctg ttg tct ctg cct cag caa ctt gag gac agt       1693
170 Leu Ala Gln Asp Leu Leu Leu Ser Leu Pro Gln Gln Leu Glu Asp Ser
171     530                 535                 540
173 gct ctg agg gac ctg ttc agc tgc agt gtc tac agg aag tat ggg ccc       1741
174 Ala Leu Arg Asp Leu Phe Ser Cys Ser Val Tyr Arg Lys Tyr Gly Pro
175 545                 550                 555                 560
177 gaa gtc ctg gta ggg cat cta agc tac cca ttt gtg cca ggt gcc cag       1789
178 Glu Val Leu Val Gly His Leu Ser Tyr Pro Phe Val Pro Gly Ala Gln
179             565                 570                 575
181 cca aat tta ttc gga gcc aat gaa gag tct gaa gcc aaa gat ccc cca       1837
182 Pro Asn Leu Phe Gly Ala Asn Glu Glu Ser Glu Ala Lys Asp Pro Pro
183             580                 585                 590
185 ctt cag agt gcc agc cct gcc ctg cag cgc ctg gtg gag agc ttg ggc       1885
186 Leu Gln Ser Ala Ser Pro Ala Leu Gln Arg Leu Val Glu Ser Leu Gly
187         595                 600                 605
189 ccc gaa ggg gag gtc ctt gtg gaa ctg gaa caa gcc ctc ggc tcc gag       1933
190 Pro Glu Gly Glu Val Leu Val Glu Leu Glu Gln Ala Leu Gly Ser Glu
191     610                 615                 620
193 gct ccc cag gaa act gag gtc aag tcc tgc ttg ttg cag ctc cag gag       1981
194 Ala Pro Gln Glu Thr Glu Val Lys Ser Cys Leu Leu Gln Leu Gln Glu
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195 625                     630                     635                     640
197 cag ccc cag ccc ttc ctc gct ctg atg cgg agc ctg gac act tcc gcc    2029
198 Gln Pro Gln Pro Phe Leu Ala Leu Met Arg Ser Leu Asp Thr Ser Ala
199                     645                     650                     655
201 agc aac aag acc ctg cac ctc act gtg ctc aga atc tta atg cag ctg    2077
202 Ser Asn Lys Thr Leu His Leu Thr Val Leu Arg Ile Leu Met Gln Leu
203                     660                     665                     670
205 gtg aac ttc cca gag gcg ctg ttg cta ccc tgg cac gag gcc atg gat    2125
206 Val Asn Phe Pro Glu Ala Leu Leu Leu Pro Trp His Glu Ala Met Asp
207             675                     680                     685
209 gcc tgc gtg acc tgc ctt cgg tcc ccc aat act gac cga gag gtg ctc    2173
210 Ala Cys Val Thr Cys Leu Arg Ser Pro Asn Thr Asp Arg Glu Val Leu
211         690                     695                     700
213 cag gaa cta atc ttt ttc ctg cac cgc ctg acc acc aca agc cgg gac    2221
214 Gln Glu Leu Ile Phe Phe Leu His Arg Leu Thr Thr Thr Ser Arg Asp
215 705                     710                     715                     720
217 tat gcg gtg ata cta aac cag cat gga gcc cgg gac gcc atc tcc aaa    2269
218 Tyr Ala Val Ile Leu Asn Gln His Gly Ala Arg Asp Ala Ile Ser Lys
219                     725                     730                     735
221 gtc ctg gaa aag cac cga ggg aaa ctg gag ttg gct cag gag ctg cgg    2317
222 Val Leu Glu Lys His Arg Gly Lys Leu Glu Leu Ala Gln Glu Leu Arg
223                     740                     745                     750
225 gat atg gtg tcc aag tgt gag aag cat gcc cac ctc tac cgg aaa ctc    2365
226 Asp Met Val Ser Lys Cys Glu Lys His Ala His Leu Tyr Arg Lys Leu
227             755                     760                     765
229 acc acc aac atc ctg ggc ggt tgc atc cag atg gtc ctg ggt cag att    2413
230 Thr Thr Asn Ile Leu Gly Gly Cys Ile Gln Met Val Leu Gly Gln Ile
231         770                     775                     780
233 gaa gac cac aga cga acc cac cgg ccc atc caa atc cca ttc ttt gat    2461
234 Glu Asp His Arg Arg Thr His Arg Pro Ile Gln Ile Pro Phe Phe Asp
235 785                     790                     795                     800
237 gtg ttt ctc aga tat ctg tgc cag ggc tcc agt gag gaa atg aag aaa    2509
238 Val Phe Leu Arg Tyr Leu Cys Gln Gly Ser Ser Glu Glu Met Lys Lys
239                     805                     810                     815
241 aac agg tac tgg gag aag gtg gag gtg tcc tcc aac cca cag cgg gcc    2557
242 Asn Arg Tyr Trp Glu Lys Val Glu Val Ser Ser Asn Pro Gln Arg Ala
243                     820                     825                     830
245 agc agg ctg acg gac cgc aac ccc aag acc tac tgg gag tcc agt ggc    2605
246 Ser Arg Leu Thr Asp Arg Asn Pro Lys Thr Tyr Trp Glu Ser Ser Gly
247             835                     840                     845
249 agg gcc ggc tcc cac ttc atc acc tta cac atg cgc cca ggt gtc atc    2653
250 Arg Ala Gly Ser His Phe Ile Thr Leu His Met Arg Pro Gly Val Ile
251         850                     855                     860
253 atc agg cag ctg act cta ctg gtg gct ggc gag gac tca agc tac atg    2701
254 Ile Arg Gln Leu Thr Leu Leu Val Ala Gly Glu Asp Ser Ser Tyr Met
255 865                     870                     875                     880
257 cca gcc tgg gtg gtg gta tgc ggg ggc aac agc atc aag tcc gtt aat    2749
258 Pro Ala Trp Val Val Val Cys Gly Gly Asn Ser Ile Lys Ser Val Asn
259                     885                     890                     895
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261 aaa gaa ctc aac acg gta aac gtg atg ccc tct gcc agc cgg gtg acc    2797
262 Lys Glu Leu Asn Thr Val Asn Val Met Pro Ser Ala Ser Arg Val Thr
263             900             905             910
265 ctc ctg gag aac ctg acc cgc ttc tgg ccc atc atc caa atc aga ata    2845
266 Leu Leu Glu Asn Leu Thr Arg Phe Trp Pro Ile Ile Gln Ile Arg Ile
267         915             920             925
269 aag cgc tgc cag cag ggt ggc att aac acg cgc atc cgg ggc cta gag    2893
270 Lys Arg Cys Gln Gln Gly Gly Ile Asn Thr Arg Ile Arg Gly Leu Glu
271     930             935             940
273 gtg ctg ggc ccc aag ccc acc ttc tgg cca gtg ttc cga gag caa ctg    2941
274 Val Leu Gly Pro Lys Pro Thr Phe Trp Pro Val Phe Arg Glu Gln Leu
275 945             950             955             960
277 tgc cgg cac acg cgc ctc ttc tac atg gtt cgg gcc cag gca tgg agt    2989
278 Cys Arg His Thr Arg Leu Phe Tyr Met Val Arg Ala Gln Ala Trp Ser
279             965             970             975
281 cag gac ata gca gag gac cgc cgg agc ctt ctg cac ctg agt tct agg    3037
282 Gln Asp Ile Ala Glu Asp Arg Arg Ser Leu Leu His Leu Ser Ser Arg
283             980             985             990
285 cta aat ggg gct ctg cgc cat gaa  cag aat ttt gca gag  cgc ttc ctt  3085
286 Leu Asn Gly Ala Leu Arg His Glu  Gln Asn Phe Ala Glu  Arg Phe Leu
287         995                 1000            1005
289 cct gat  atg gag gcc gcc caa  gca ctg agc aag acc  tgc tgg gag      3130
290 Pro Asp  Met Glu Ala Ala Gln  Ala Leu Ser Lys Thr  Cys Trp Glu
291     1010                1015            1020
293 gcg ctg  gtc agc ccc ctg gtg  cag aac att aca tct  ccc gat gag      3175
294 Ala Leu  Val Ser Pro Leu Val  Gln Asn Ile Thr Ser  Pro Asp Glu
295     1025                1030            1035
297 gac agc  acc agc tcc ttg ggc  tgg ctg ctg gat cag  tac ttg gga      3220
298 Asp Ser  Thr Ser Ser Leu Gly  Trp Leu Leu Asp Gln  Tyr Leu Gly
299     1040                1045            1050
301 tgc agg  gag gct gcc tac aat  ccc cag agc agg gct  gct gct ttc      3265
302 Cys Arg  Glu Ala Ala Tyr Asn  Pro Gln Ser Arg Ala  Ala Ala Phe
303     1055                1060            1065
305 tcc tcc  cgg gtt cgc cgc ctt  acc cac ctc ctg gtc  cat gtg gag      3310
306 Ser Ser  Arg Val Arg Arg Leu  Thr His Leu Leu Val  His Val Glu
307     1070                1075            1080
309 ccc cgt  gag gca gca cct ccg  gtg gtg gcc atc cct  cga tcc aag      3355
310 Pro Arg  Glu Ala Ala Pro Pro  Val Val Ala Ile Pro  Arg Ser Lys
311     1085                1090            1095
313 ggc agg  aac aga atc cat gac  tgg agc tac ttg atc  acc cgg ggc      3400
314 Gly Arg  Asn Arg Ile His Asp  Trp Ser Tyr Leu Ile  Thr Arg Gly
315     1100                1105            1110
317 ctt cca  agt agc atc atg aag  aac ctg acc cgc tgt  tgg cgg tct      3445
318 Leu Pro  Ser Ser Ile Met Lys  Asn Leu Thr Arg Cys  Trp Arg Ser
319     1115                1120            1125
321 gtg gtg  gag gag cag atg aac  aag ttt ctc agt gcg  tcc tgg aaa      3490
322 Val Val  Glu Glu Gln Met Asn  Lys Phe Leu Ser Ala  Ser Trp Lys
323     1130                1135            1140
325 gac gat  gat ttc gta ccc cgc  tat tgc gag cgc tat  tac gtc ctg      3535
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